## Claims

1. An optical compensatory sheet having a transparent support and an optically anisotropic layer formed from liquid crystal molecules aligned in an average inclined angle of less than 5°, wherein the optical compensatory sheet has a retardation value in plane defined by the following formula in the range of 10 to 1,000 nm, and a retardation value along the thickness direction defined by the following formula in the range of 10 to 1,000 nm:

$$Re=(nx-ny)\times d$$

$$Rth=[\{(nx+ny)/2\}-nz]\times d$$

in which Re is the retardation value in plane; Rth is the retardation value along the thickness direction; each of nx and ny is a refractive index in the plane of the optical compensatory sheet; nz is a refractive index along the thickness direction of the optical compensatory sheet; and d is the thickness of the optical compensatory sheet.

2. The optical compensatory sheet as defined in claim 1, wherein the optical compensatory sheet has a retardation value in plane in the range of 20 to 200 nm.

3. The optical compensatory sheet as defined in claim 1, wherein the optical compensatory sheet has a retardation value along the thickness direction in the range of 70 to 500 nm.

4. The optical compensatory sheet as defined in claim 1, wherein the transparent support has an optically uniaxial birefringence or an optically biaxial birefringence.

5. The optical compensatory sheet as defined in claim 4, wherein the transparent support has a retardation value in plane defined by the following formula in the range of 10 to 1,000 nm:

$$Re=(nx-ny)\times d$$

in which Re is the retardation value in plane; each of nx and ny is a refractive index in the plane of the support; nz is a refractive index along the thickness direction of the support; and d is the thickness of the support.

6. The optical compensatory sheet as defined in claim 4, wherein the transparent support has the retardation value along the thickness direction defined by the following formula in the range of 10 to 1,000 nm:

$$Rth=[\{(nx+ny)/2\}-nz]\times d$$

in which Rth is the retardation value along the thickness direction of the support; each of nx and ny is a refractive index in the plane of the support; nz is a refractive index along the thickness direction of the support; and d is the thickness of the support.

7. The optical compensatory sheet as defined in claim 1, wherein the liquid crystal molecules are discotic liquid crystal molecules.

8. The optical compensatory sheet as defined in claim 7, wherein the optical compensatory sheet further has a second optically anisotropic layer formed from rod-like liquid crystal molecules.

9. The optical compensatory sheet as defined in claim 8, wherein the rod-like liquid crystal molecules in the second optically anisotropic layer are aligned in an average inclined angle of less than 5°.

10. The optical compensatory sheet as defined in claim 8, wherein the optical compensatory sheet comprises the optically anisotropic layer, the transparent support and the second optically anisotropic layer in this order.

11. The optical compensatory sheet as defined in claim 8, wherein the optical compensatory sheet comprises the transparent support, the optically anisotropic layer and the second optically anisotropic layer in this order.

12. The optical compensatory sheet as defined in claim 8, wherein an average direction of lines obtained by projecting the normals of discotic planes of discotic liquid crystal molecules in the optically anisotropic layer onto the transparent support is essentially parallel or perpendicular to an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the second optically anisotropic layer onto the transparent support.

13. The optical compensatory sheet as defined in claim 8, wherein the transparent support has an optically uniaxial birefringence or an optically biaxial birefringence, and an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the second optically anisotropic layer onto the support is essentially parallel or perpendicular to the slow axis in plane of the support.

14. The optical compensatory sheet as defined in claim 1, wherein the liquid crystal molecules comprise a mixture of discotic liquid crystal molecules and rod-like liquid crystal molecules.

15. The optical compensatory sheet as defined in claim 14, wherein the transparent support has an optically uniaxial birefringence or an optically biaxial birefringence, and an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the optically anisotropic layer onto the support is essentially parallel or perpendicular to the slow axis in plane of the support.

16. The optical compensatory sheet as defined in claim 1, wherein the liquid crystal molecules are rod-like liquid crystal molecules.

17. The optical compensatory sheet as defined in claim 16, wherein the transparent support has an optically uniaxial birefringence or an optically biaxial birefringence, and an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the optically anisotropic layer onto the support is essentially parallel or perpendicular to the slow axis in plane of the support.

18. The optical compensatory sheet as defined in claim 16, wherein the optical compensatory sheet further comprises a second optically anisotropic layer formed from rod-like liquid crystal molecules.

19. The optical compensatory sheet as defined in claim 18, wherein the rod-like liquid crystal molecules in the second optically anisotropic layer are aligned in an average inclined angle of less than 5°.

20. The optical compensatory sheet as defined in claim 18, wherein the optical compensatory sheet comprises the optically anisotropic layer, the transparent support and the second optically anisotropic layer in this order.

21. The optical compensatory sheet as defined in claim 18, wherein the optical compensatory sheet comprises the transparent support, the optically anisotropic layer ~~and the second optically anisotropic layer in this order.~~

22. The optical compensatory sheet as defined in claim 18, wherein an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the optically anisotropic layer onto the transparent support is essentially perpendicular to an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the second optically anisotropic layer onto the transparent support.

23. The optical compensatory sheet as defined in claim 18, wherein an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the optically anisotropic layer onto the transparent support is at an angle of 5° to 85° to an average direction of lines obtained by projecting the long axes of rod-like liquid crystal molecules in the second optically anisotropic layer onto the transparent support.

24. An elliptically polarizing plate comprising a transparent protective film, a polarizing membrane, and an optical compensatory sheet having a transparent support and an optically anisotropic layer formed from liquid crystal molecules aligned in an average inclined angle of less than 5°, wherein the optical compensatory sheet has the retardation value in plane defined by the following formula in the range of 10 to 1,000 nm, and the retardation value along the thickness direction defined by the following formula in the range of 10 to 1,000 nm:

$$Re=(nx-ny)\times d$$

$$Rth=[\{(nx+ny)/2\}-nz]\times d$$

in which Re is the retardation value in plane; Rth is the retardation value along the thickness direction; each of nx and ny is a refractive index in the plane of the optical compensatory sheet; nz is a refractive index along the thickness direction of the optical compensatory sheet; and d is the thickness of the optical compensatory sheet.

25. The elliptically polarizing plate as defined in claim 24, wherein the elliptically polarizing plate comprises the optically anisotropic layer, the transparent support, the polarizing membrane and the transparent protective film in this order.

26. A liquid crystal display comprising a liquid crystal cell of VA mode and two polarizing elements placed on both sides of the cell, wherein at least one of the polarizing elements comprises a transparent protective film, a polarizing membrane, and an optical compensatory sheet having a transparent support and an optically anisotropic layer formed from liquid crystal molecules aligned in an average inclined angle of less than 5°, said optical compensatory sheet having the retardation value in plane defined by the following formula in the range of 10 to 1,000 nm, and the retardation value along the thickness direction defined by the following formula in the range of 10 to 1,000 nm:

$$Re=(nx-ny)\times d$$

$$Rth=[\{(nx+ny)/2\}-nz]\times d$$

in which Re is the retardation value in plane; Rth is the retardation value along the thickness direction; each of nx and ny is a refractive index in the plane of the optical compensatory sheet; nz is a refractive index along the thickness direction of the optical compensatory sheet; and d is the thickness of the optical compensatory sheet.